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To conquer the invisible enemy. (A visit to the school for atomic, biological and chemical defense of the West German army).

by H. Mischler.

Soldat und Technik, March 1959.

(Title illustration): A drawing from the Soviet manuals for atomic, biological and chemical defense.

(Introductory remarks): The soldier of the West German army confronted by the atomic mushroom! -- How will he be able to protect himself against this weapon? And against the radioactive fallout emitted by "the bomb," a treacherous enemy which the soldier can neither see, hear or smell, in the face of which his human senses fail? SOLDAT UND TECHNIK for the first time publishes details about the ABC Defense School of the West German Army (ABC = atomic, biological, chemical weapons). The officers of the school, led by Lt Col Mitscherling, summarize their task with these words: "Even against atomic weapons there are certain protective measures. We must show our soldiers these measures and practise them, so that the troops are enabled to take advantage of every chance of survival."

(Text): Whether the West German army will be equipped with atomic weapons or not -- as long as it exists and as long as it is responsible for the defense of the country, it will be forced to prepare for an adversary who possesses atomic weapons. The intensity with which the Soviets have prepared for years for action with ABC weapons is shown by the reproduction of the above drawing taken from the manual of ABC defense of the Red Army, and this as early as the year 1954! How good are the soldier's chances in case of possible conflict? The answers to these questions are decisive for the military value of the West German army -- and they may become fateful to the individual soldier. How is today's soldier equipped to conquer the invisible danger?

Nuclear physicists school the West German army in the fundamentals of atomic physics (upper picture on the facing page). The knowledge of the danger is the first step toward protection -- this sentence is nowhere more valid than in atomic protection and atomic defense. In the lavishly equipped laboratories of the ABC school, future officers of atomic defense troops are given the scientific tools for their missions. The proper behavior of the soldier in connection with other weapons may be practised under realistic conditions -- on many drill fields of the world the attack is practised under live fire --, in the case of atomic weapons the training officers must rely on the words of the nuclear physicists.

The reconnaissance elements of a modern army advance against an invisible enemy. An atomic detection team is planned for every independent unit, specially trained to determine radioactive contamination

of the area. The reconnaissance leader of the atomic age no longer detects the enemy with binoculars, he reads him on the metric scale of his detection instrument (see our title illustration). It not only shows him the intensity of the rays emitted by the environment, it also registers the dosis of radiation received by the reconnaissance unit -- to how many roentgens each man has been exposed. As soon as the highest permissible limit of radiation, the socalled "return dosis" is reached, a red warning lamp lights up on the measuring instrument of the unit leader, and an alarm is sounded; the invisible atomic rays force them to retreat. -- In addition, every soldier, no matter what his duty assignment may be, carries a strip of roentgen film in his identification budge. We refer the reader to our contribution on radioactive effects in Issue 1/58, page 34. When the film is developed, and this is done at regular intervals in the case of danger, the dosis of radiation received by the bearer may be determined from the degree to which the film has been blackened. Thus today's First Sergeant has an additional task: He must keep a precise log of the radiation exposure of his soldiers.

An invisible wall forms the limit of an area contaminated radioactively. As soon as the reconnaissance troops have reached this boundary, they mark it with yellow ribbons and attach signs on the reverse of which are indicated the date, time and degree of contamination per hour. Then the unit withdraws. Even if presence in an "irradiated" area does not make the clothes, weapons and equipment radioactive, the radiating dust must nevertheless be shaken from the camouflage suits -- first expediently with fir branches, and if upon monitoring at the rear company command post the Geiger counter still registers, the uniform and weapons must be taken off immediately and turned in for decontamination. The gas mask may be taken off only at the end of this procedure, to prevent the inhalation of radioactive dust particles.

The four men in the jeep -- they may have come from a utopian film (page 133 center). The motorized atomic defense team wears protective suits made of plastic with aluminum sprayed in. These suits are complicated apparel, the soldiers must assist each other in donning them. At least they offer positive protection against alpha and beta radiation, and they keep the radioactive dust away from the body. --- The motorized atomic defense team penetrates more deeply into the contaminated region and determines whether it may be crossed at high speed, or whether the danger zone must be circumvented. The four men in the jeep also turn around as soon as they have reached their "return dosis" and when the red light comes on in their measuring instrument.

Under certain conditions radioactive dust may form a road block that is more dangerous and effective than trees and anti-tank ditches. One does not see or hear this obstacle, and yet it is dangerous. Huge tank trucks of American make wash the atomic dust from the road surface, and the radiation is thus considerably decreased, even though not removed (p. 133 lower).

The soldier of the atomic age must complement his senses with measuring instruments if he wants to detect his invisible enemy, radioactivity. He must envelope himself in ghostly clothing, if he wants to persist against this treacherous enemy. He must distort his face and turn his external appearance into something "inhuman." --- He will be forced to do this. These are his chances to conquer the invisible enemy. Let us hope that he will never be called upon to rely on these chances in earnest.